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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,964	05/10/2006	Reinwald Mitsam	1093-155 PCT/US	8547
23869	7590	12/13/2007	EXAMINER	
HOFFMANN & BARON, LLP			MALEKZADEH, SEYED MASOUD	
6900 JERICHO TURNPIKE			ART UNIT	PAPER NUMBER
SYOSSET, NY 11791			1791	
			MAIL DATE	DELIVERY MODE
			12/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,964	Applicant(s) MITSAM, REINWALD	
	Examiner SEYED M MALEKZADEH	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 6-7, and 9 is/are rejected.
- 7) ☒ Claim(s) 3-5 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

In view of the applicant's arguments, filed on 09/27/2007 which are found persuasive, following rejections are withdrawn from the previous office action for the reason of record.

- Rejection of claims 1, 3, 5, and 9 under 35 U.S.C. 103 (a) as being unpatentable over Mitsam (PCT/DE03/01042) in view of Froese et al (US 6,007,320)
- Rejection of claims 2 and 4 under 35 U.S.C. 103 (a) as being unpatentable over Mitsam (PCT/DE03/01042) in view of Froese et al (US 6,007,320), and further in view of Sagane et al. (US 3,917,774)
- Rejection of claims 6-8 under 35 U.S.C. 103 (a) as being unpatentable over Mitsam (PCT/DE03/01042) in view of Froese et al (US 6,007,320), and further in view of Kemerer et al. (US 5,458,477)

Following objections are maintained for the reason of records as given in the previous office action. The basis of these rejections is the same as given in previous office action mailed on 06/25/2007.

- Objection of drawing

New Grounds of Rejection

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsam (PCT/DE03/01042) in view of Sagane et al (US 3,917,774)

Mitsam ('042) teaches an embossing station (12) for an embossing apparatus which is provided for transferring a transfer layer (42) of an embossing film (44) on to a flat element (38) to be embossed upon which is stable in respect of shape, wherein the embossing station has two support rollers (16) which are spaced from each other and which are in mutually axis-parallel relationship and one deflection roller (18), spaced from the support rollers (16) and in axis-parallel relationship with the support rollers (16), around which an embossing belt (20) is deflected, wherein an embossing section (26) of the embossing belt (20) is determined by the support rollers (16) wherein provided between the two support rollers (16) is a support body (28) which supports the embossing belt (20).

Furthermore, with respect to claim 4, however the prior art is silent about low-friction coating for the sliding belt, the sliding belt is expected to have a low friction coating to function as a sliding belt in the apparatus with two support rollers in which the sliding belt slide on the sliding surface of the support body.

However, Mitsam ('042) fail to teach the support body has a sliding surface which is in a tangential plane connecting the

two support rollers, as claimed in claim 1, also does not teach the embossing belt has a low-friction layer at its inside, as claimed in claim 2, and further fail to teach the support body and/or the compressed gas inlet are provided with a heating device, as claimed in claim 9

In the analogous art, Sagane et al ('774) teaches an apparatus for preparing an elongated foamed resin article reinforced by continuous fibers in which continuous fibers are advanced in parallel relationship in a sheet-like form and are impregnated with a liquid (See abstract). Further, Sagane et al ('774) disclose a rectangular tube (9) as a support body in which the endless belts (5, 6, 7) pass thorough the support body (9) in a way that the belts are advanced along respective inner surfaces of the rectangular tube (9) (See lines 6-41, column 7) wherein the belts are sliding on inner surface of the rectangular tube and also combination of endless belts (5, 6, 7) and rectangular tube (9) construct a passage for molding. (See lines 6-41, column 7)

Furthermore, Sagane et al ('774) teach the rectangular tube (9) has advantages to guide the movement of the belts for the molding and also to provide a smooth surface for the belts

to make the surface of the product also smooth. (See lines 14-20 and lines 38-41, column 7)

Further, Sagane et al ('774) teaches in order to minimize the friction between the rectangular tube (9) and the endless belts (5, 6, and 7), suitable lubricants are applied to the surface of the contacting surface of the endless belts with the rectangular tube. (See lines 55-65, column 7)

Also, Sagane et al ('774) teaches plate heaters are provided so as to surround a portion of the outer surfaces of the rectangular tube (9) to heat the passage for the molding. (See lines 8-14, column 16 and lines 55-59, column 22). Further, Sagane et al ('774) disclose providing heat for the belts which passes through the molding passage (9) improve the quality of the product obtained by the embossing device. (See lines 15-22, column 10)

Therefore, it would have been obvious for one of ordinary skill in the art at the time of applicants' invention to modify the embossing device of the Mitsam et al. by providing a sliding surface for the support body of the embossing device in order to guide the movement of the belts for the molding and to obtain products with the smooth surface, and further, to provide a low friction layer for the embossing belt in order to minimize the

friction between embossing belt and the sliding surface of the support body, and also to provide a heating device for the support body in order to improve the quality of the product obtained by the embossing device, as suggested by Sagane et al ('774).

Claims 6 - 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsam (PCT/DE03/01042) in view of Sagane et al (US 3,917,774), as applied to claims 1-2 above, and further in view of Kremerer et al (US 5,458,477)

Combined teachings of Mitsam ('042) and Sagane et al. ('774) disclose all the structural limitations of an embossing station for an embossing apparatus as discussed above in rejection of claims 1-2. However, Mitsam ('042) and Sagane et al. ('774) fail to teach the support body has a gas-permeable porous flat element, as claimed in claim 6, wherein the gas-permeable porous element closes a cavity which is provided in the support body, as claimed in claim 7.

In the analogous art, Kemerer et al. (US 5,458,477) teach an apparatus for continuous three-dimensional forming of heated thermoplastic materials. The apparatus include a frame (20) which is comprised of steel side plates (21), backup plates

(22), and cross-bracing members (23). (See lines 16-22, column 11; Figure 1)

Further, Kemerer et al ('477) discloses a backup plate (22) in which is coated with a material with excellent lubricity (59) which provide a continuous level platen for supporting and guiding the belt molds (34) and (36) to slide forward under a constant pressure thereby stabilizing the height, configuration, orientation, posture, and belt pressure being provided consistently along the traveling, flexible, mold channel (33). (See lines 23-29, column 11; figures 1-3, and 7)

Also, Kemerer et al ('477) discloses the backup plates (22) are drilled with a multitude of air-bearing holes (60) as a gas-permeable porous, aimed toward the advancing belt mold, and extending through the high-density slippery backup plate coating (59). (See lines 30-34, column 11 and figures 2-3, 7)

Furthermore, Kemerer et al ('477) teaches the backup plate (22) as a gas-permeable porous element closes wide rectangular air-bearing chambers (63). (See lines 48-55, column 7; also lines 30-49, column 11 and figure 7)

Further, Kemerer et al ('477) discloses the advantageous of the backup plate (22) with multitude air bearing holes (60) in order to minimize the belt mold sliding-contact pressure against

backup plate and also to reduce wearing of the belts and backup plate coating. (See lines 50-53, column 11)

Therefore, it would have been obvious for one of ordinary skill in the art at the time of applicant's invention to modify embossing station from combined teachings of Mitsam ('042) and Sagane et al ('774) by including a support body which has a gas-permeable porous flat element in order to minimize the belt mold sliding-contact pressure against backup plate and to reduce wearing of the belts and backup plate coating, as suggested by Kemerer et al ('477).

Allowable Subject Matter

Claims 5 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 5 require additional structural limitation because claims a tensioning device in which the prior arts of record fail to teach or suggest a sliding belt which can be

tensioned around the two support rollers by means of a tensioning device as claimed in claim 5, and also fail to teach or suggest the gas permeable porous flat element has two laterally mutually oppositely disposed side surfaces which are associated with the two mutually remote longitudinal edges of the embossing belt, as claimed in claim 8. The closest prior arts of record are Mitsam (PCT/DE03/01042), Sagane et al (US 3,917,774), Kemerer et al. (US 5,458,477) as discussed above. These references fail to teach or suggest limitations of claims 3-5 and 8.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. For the further references related to the mold apparatus, see PTO 892 submitted to this document - reference numbers US 5,700,495 and US 6,343,924

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Masoud Malekzadeh whose telephone number is 571-272-6215. The

Application/Control Number:
10/578,964
Art Unit: 1791

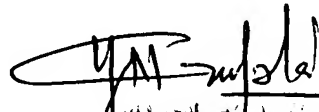
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examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on (571) 272-1316. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SMM


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